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ST-HL-AE-3647

File No.: G25

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

South Texas Project Electric Generating Station
Unit 2

Docket No. STN 50-499

Waiver of Compliance for

Technical Specification 3.7.1.2 Action b

Houston Lighting & Power (HL&P) requests a Waiver of Compliance from the requirements of Technical Specification 3.7.1.2 Action b as it applies to the turbine driven pump. HL&P proposes that the 72 hours allowed outage time (AOT) for 3.7.1.2 Action b be increased by an additional 72 hours. This extension will allow HL&P adequate time to repair and test the pump while remaining in Mode 3.

Similar requests were made for Unit 1 and 2 by letters dated February 24, 1988, ST-HL-AE-2535 and February 23, 1989, ST-HL-AE-3008. These requests were granted by letters dated February 29, 1988 and February 23, 1989.

The following information is required pursuant to NRC correspondence dated February 22, 1990 to support a Waiver of Compliance.

- 1) Discussion of the Requirements for which a Waiver is requested.

TECHNICAL SPECIFICATION 3/4.7.1.2 Action b

Technical Specification 3.7.1.2 requires that the turbine driven AFW pump be operable. If the turbine driven AFW pump is inoperable, a 72 hour AOT is applicable or be in Mode 3 within the next 6 hours and in Mode 4 within the following 6 hours.

This proposed Waiver of Compliance would extend the AOT an additional 72 hours.

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(2) Discussion of the Circumstance Surrounding this Request.

On December 2, 1990 at 2115 on Unit 2 in Mode 3, it was determined that the overspeed trip device for the steam-driven AFW pump would not trip the turbine as designed. This inoperability was due to the linkage actuating the overspeed trip being mechanically distorted and a teflon bearing being partially degraded. Parts are on site and installed and adjustments of the linkage is continuing. STPEGS personnel have been trouble-shooting the problem and do not believe that the pump will be operable by 2115 on December 5, 1990 which is the end of the 72 hour AOT. Testing on the turbine driven pump is continuing and must be performed in Mode 3 because the turbine requires steam to perform the testing. If a waiver of compliance is not granted the plant will be required to return to Mode 4 to reset the 72 hour AOT clock and then return to Mode 3 to test the turbine driven pump. This pressure cycle is unnecessary. Substantial effort is being devoted to this problem as it is on critical path for Unit 2's restart from its refueling outage.

3) Compensatory Actions

All three-motor driven auxiliary feedwater pumps are operable and each is capable of being powered from separate emergency busses.

4) Safety Significance and Potential Consequences of the Proposed Request.

The function of the AFW system is to provide a source of feedwater to the steam generators when the MFW system or the RHR system is not available. Major components of the AFW system include a storage tank, three motor-driven pumps, one steam-driven pump, piping, valves, instruments and controls. Water is drawn from the AFW storage tank through underground piping to the AFW pumps. The pumps discharge to supply the SGs with feedwater. Separate ESF buses power the 800 hp motors of the three motor-driven pumps, while steam supply from SG "D" power the steam-driven pump. During plant heatup and startup the AFW system may be used in manual control to maintain SG water level until the Main Feedwater system is available. In order to mitigate the consequences of a trip or accident, two of the four pumps are adequate. Therefore, with three operable motor-driven AFW pumps there is substantial margin in the AFW system. Additionally, Unit 2 has been shutdown since September 29, 1990 and there is low decay heat in the reactor core and this waiver would save an unnecessary pressure cycle.

The turbine driven pump is provided for use in station blackout conditions. Station blackout initiators are primarily related to extreme weather conditions. For the time period of this requested waiver, no extreme weather is predicted. Therefore, a station blackout event for the time period under consideration is not a credible event. In addition Unit 1 and 2 are not in operation and will not be in operation for the duration of the request. Consequently a trip of these units can not perturb the grid.

5) Justification for the Duration of the Request

The AFW system unavailability is modeled in the STPEGS Probabilistic Safety Assessment (PSA) (Letter dated April 14, 1989, ST-HL-AE-3059). Extrapolating the PSA model to a one time Waiver of Compliance for an additional 72 hours results in a negligible increase in core damage frequency for the period of the requested waiver.

6) No Significant Hazards Consideration

- a. The proposed Waiver of Compliance does not involve a significant increase in the probability of previously evaluated accident (loss of normal secondary decay heat removal capacity) because the motor driven AFW pumps will still mitigate this condition.

The consequences of a previously evaluated accident do not significantly increase because only two AFW pumps are required for initial decay heat removal from the secondary side of the plant under various accident scenarios and three motor-driven pumps would be available. This would allow for the single failure of one motor-driven AFW pump with two motor-driven AFW pumps still available. Therefore, the consequences of a loss of normal secondary decay heat removal remains unchanged.

- b. The proposed Waiver of Compliance does not create the possibility of a new or different accident from any previously evaluated since there is no new design or operation of the AFW system and consequently there are no new accident initiators.

- c. The proposed change does not involve a significant reduction in the margin of safety. The margin of safety does not significantly change since the change in core damage frequency is negligible.

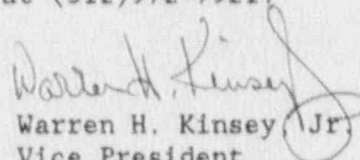
7. Irreversible Environmental Consequences.

HL&P has reviewed the proposed Waiver of Compliance and the NRC Final Environmental Assessment for STPEGS Units 1 and 2 and has concluded that pursuant to 10CFR51, there are no significant radiological or non-radiological impacts associated with the proposed Waiver of Compliance.

The proposed Waiver maintains three motor-driven AFW pumps and only two AFW pumps are required to mitigate an accident. Therefore there are no irreversible environmental consequences.

The STPEGS Plant Operations Review Committee (PORC) has reviewed the proposed Waiver of Compliance.

If you should have any questions concerning this matter please contact Mr. M.A. McBurnett at (512)972-8530 or myself at (512)972-7921.


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